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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/788,539 | 02/27/2004 | Xinsheng Sean Ling | L030 P001028-US | 7079 |

3017 7590 01/17/2007
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| EXAMINER |
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LEWIS, DAVID LEE

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| ART UNIT | PAPER NUMBER |
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2629

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/17/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/788,539

Applicant(s)

LING, XINSHENG SEAN

Examiner

David L. Lewis

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/5/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodate et al. (6784862) in view of Kwon et al. (6566902) and Huang (6013923).**

As in claim 1, Kodate et al. teaches of a detection circuit for a display panel applying a switch installed on the detection circuit for switching a shorting-bar layout, figure 2,

the detection circuit for the display panel comprising: a plurality of signal contact pads comprising a plurality of gate end contact pads and a plurality of data end contact pads, figure 2 item 16,

a plurality of scan lines and a plurality of data lines of the display panel being connected to an external detection circuit via the plurality of signal polar plates, column 5 lines 36-67;

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a plurality of data driver signal lines, the plurality of data end contact pads being alternatively connected to the plurality of data driver signal lines via a plurality of conducting wires, **figure 2 item 4**;

a plurality of gate driver signal lines, the plurality of gate end contact pads being alternatively connected to the plurality of gate driver signal lines via the plurality of conducting wires, **figure 2 item 5**;

a plurality of switches positioning on the conducting wires for connecting the plurality of signal contact pads and the plurality of data driver signal lines with the plurality of gate driver signal lines, **figure 2 items 22 and 25**;

wherein the plurality of switches are used for switching the detection signal of the display panel to be transmitted to the plurality of gate driver signal lines and the plurality of gate driver signal lines, **figure 2 items 22 and 25**.

However Kodate fails to teach of said a short-ring layout and a plurality of resistances, the plurality of scan lines and the plurality of data lines being connected to a ring signal line via the plurality of resistances.

Kwon et al. teaches of a short ring layout and a plurality of resistances and the plurality of data lines being connected to a ring signal line via the plurality of resistances, figure 1 item 4 and CL. However Kwon et al. is silent as to teaches the gate lines being connected to a ring signal line.

Huang teaches of a plurality of resistances connected to the gate and data lines as shown in figure 3 and 6, wherein as shown in figure 6 said resistance values are connected to a short ring for the purpose of providing ESD protection to the gate and data lines. Huang provides motivation for Kwon et al. to expand the ESD protection to the gate lines as well as the data lines.

Therefore it would have been obvious to the skilled artisan at the time of the invention to combine the short ring of Kwon as modified by the short ring of Huang connecting to both the gate and data lines, in the active matrix device of Kodate because both Kwon and Huang teach a ring based ESD protection circuit is useful in a device as taught by Kodate providing contact pads for the purpose of connecting to an external inspection circuit, as found in claim 1.

As in claim 2, Kodate teaches of wherein the plurality of switches are a plurality of transistors, figure 2 items 22 and 25.

As in claim 3, Kodate teaches of wherein a plurality of switches are connected each other via a connecting conducting wire, figure 2 items 31-35 and 41-53.

As in claim 4, Kodate teaches of wherein the ring signal line is connected to a ring signal end, Kwon et al., figure 1 item Vcom.

As in claim 5, Kodate teaches of wherein the plurality of gate driver signal lines are connected to a plurality of gate ends, figure 2 items 31-35.

As in claim 6, Kodate teaches of wherein the plurality of data driver signal lines are connected to a plurality of data ends, figure 2 item 41-53.

As in claim 7, Kodate teaches of wherein the ring signal end, the plurality of gate ends and the plurality of data ends are detection ends for the detection signal, column 5 lines 21-67.

As in claim 8, Kodate teaches of wherein the plurality of signal contact pads are a plurality of probe contacting contact pads, figure 2 item 16.

As in claim 9, Kodate teaches of wherein when the plurality of switches are on, a detection circuit with a shorting-bar layout is used, figure 2 items 4 and 5; when the plurality of switches are off, a detection circuit with a short-ring layout is used, Kwon et al. figure 1 item CL/Vcom.

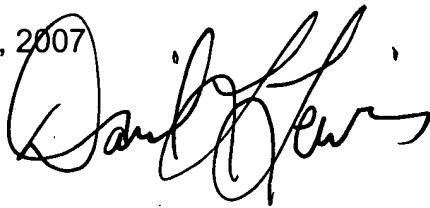
Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 2006/0077162, 2002/0140650, 2003/0210359, 6839121.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(571) 272-7673**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on **(571) 272-7681**. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571)-273-8300.
4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: David L. Lewis

January 2, 2007

A handwritten signature in black ink, appearing to read "David L. Lewis", is written over the date.